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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/836,368 | 04/18/2001 | Naosato Taniguchi | 2369.12215 | 6893 |

5514 7590 09/11/2003

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EXAMINER

CHANG, AUDREY Y

ART UNIT PAPER NUMBER

2872

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,368

Applicant(s)

TANIGUCHI ET AL.

Examiner

Audrey Y. Chang

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 31-38 is/are pending in the application.
- 4a) Of the above claim(s) 6-12, 14, 26 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13, 15-25, 27-29, 31-33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on July 2, 2003, which has been entered as paper number 10.
- By this amendment, the applicant has amended claims 1-29 and 31-38 and has canceled claim 30.
- Claims 6-12, 14, 26, and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.
- Claims 1-5, 13, 15-25, 27-29, 31-33 and 35-38 remain pending in this application.
- The rejections to claims 2-3, 13, 15, 17, 18-19, 29-31, 37 and 38 under 35 USC 112, second paragraph, set forth in the previous Office Action dated April 2, 2003 are withdrawn in response to applicant's amendment.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1-5, 13, 15-25, 27-29, 31-33 and 35-38 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 has been amended to include the feature having "an image displaying device for displaying parallax images corresponding a plurality of different viewpoints; ... a position of light

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transmitting section formed on said optical modulator is controlled so as to be synchronized with a switchover timing of the parallax images displayed by said image displaying device ...". The claim fails to disclose the essential requirement for the format of the image displayed on the image device in order for such apparatus to be operable and for such synchronized switchover to be possible. The essential requirement is for the image displayed on the device to be a *synthesized image* having alternatively arranged image stripes from the left eye parallax image and from the right eye parallax image. Without such format, the switchover does not define and the apparatus as defined by the claim will not be able to provide stereoscopic image display and will not be able to allow the entirety of one of the parallax image be viewed by the observer since some parts of the parallax image will be blocked by the light shielding section.

Also "a **position** of the light transmitting section formed on said optical modulator ... controlled synchronized" will not be able to provide stereoscopic image display. The applicant is respectfully noted that as disclosed by Figure 1, the modulator has a **plurality** of transmitting sections and a **plurality** of light shielding sections, **not just one of each**. It is the **collection** of the image light representing one parallax image (left eye or right eye) on the synthesized image from **all** of the transmitting sections to reach the particular eye of the observer that the apparatus is capable of providing stereoscopic image. A **single** transmitting section **WILL NOT** be able to provide stereoscopic image display and will not be able to allow the entirety of the parallax image be viewed by the observer. Also the specification and the claims fail to disclose what is considered to be the "*synchronization*" of the light transmitting section with respect to the switchover.

Claims 1 and 29 fail to provide what is considered to be the "switchover" therefore it fails to provide an operable stereoscopic image device.

Claim 29 has been amended to include the feature “an image display device for *making* parallax images”. The specification and the claim fail to disclose that the display device makes the parallax images. They are simply displayed on it but not made by it.

Claim Objections

3. **Claims 1-5, 13, 15-25, 27-29, 31-33 and 35-38 are objected** to because of the following informalities:

- (1). The phrase “a switchover timing” recited in claim 1 is not defined since it is not clear the switching is between what.
- (2). The phrase “perpendicularly arranged” recited in various claims are confusing and indefinite since it is not clear with respect to what the “perpendicular” is defined.
- (3). The phrase “said image display means displays an image having no parallax on the entire ... surface thereof” recited in claim 13 is in contradiction with respect to its based claim since in the based claim the display is to display parallax images.
- (4). The phrase “focuses in the perpendicular direction ... sets in the horizontal direction” are confusing and indefinite since it is not clear what does this phrase mean and with respect to what are these directions defined.
- (5) It is not clear what is the structural relationship between the “optical system” and the “optical element”.
- (6) It is not clear what is considered to be “light beam intersecting planes” Judging from Figure 3, the light beams will only intersect at one single plane.

Appropriate correction is required. The applicant is respectfully requested to clear out all of the discrepancies and indefiniteness in the claims (weather be mentioned above or not) to make the claims in comply with the requirements of status and rules.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. **Claims 1-5, 13 15-25, 27-28, 29, 31-33 and 35-38** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16, and 17-22 of copending **Application No. 09/772,989** in view of the patent issued to **Mashitani et al (PN. 5,663,831)**.

The instant application and the co-pending application (09/772,989) both disclose a stereoscopic image display (the method is implicitly included in the apparatus disclosure since the method is nothing but applying the apparatus) that is comprised of an image display device for displaying synthesized images, a second optical system for directing and forming the images from the display device on light transmitting sections and light shielding second formed within an optical modulator or on a mask (having opening and shielding regions for passing or shielding the image light), and a first optical system for collecting the image light from the light transmitting sections to an observation surface, (please see Figure 1 of the instant application and Figure 1 of the cited patent). The only difference is that the instant application recites the light transmitting sections and the light shielding sections are formed on a modulator. However using modulator as a mask to form patterned light transmitting and light shielding

sections is quite well known in the art as demonstrated by the teachings of Mashitani et al wherein a parallax barrier (50, Figure 7) having mask pattern of slits (5a) (i.e. light transmitting sections) and barriers (i.e. light shielding sections) for use in a stereoscopic image display system is constructed by using a liquid crystal element (known type of optical modulator) (50, Figure 7, column 5, lines 56-67). It would then have been obvious to one skilled in the art to modify the mask of the co-pending application (09/772,989) by forming the mask pattern on an optical modulator such as liquid crystal element for the benefit of providing electronic control to the mask pattern and more easily manipulating and changing the mask pattern as desired. The instant application and the co-pending application (09/772,989) therefore are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

6. Applicant's arguments filed July 2, 2003 have been fully considered but they are not persuasive. The amendments to the claims have been fully considered and they are rejected for the reasons stated above.

7. In response to applicant's arguments, which state that the cited co-pending application and the cited Mashitani et al reference do not teach the synchronization control of the light transmitting section of the modulator, the examiner respectfully disagrees for the following reasons. Firstly, if the opening of the mask or the transmitting sections of the modulator is not in synchronization with the displaying of the image, the system will not be able to provide stereoscopic image display. The fact that both the co-pending application and the cited reference disclose a stereoscopic or three-dimensional image display device, such synchronization is implicitly and necessarily included. The order of the parallax images in the synthesized image is just an obvious modification in displaying the image. It constitutes no patentable difference.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 703-305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

*Audrey Y. Chang
Primary Examiner
Art Unit 2872*

A. Chang, Ph.D.